



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

In the *Transactions of the London Zoölogical Society* Dr. Boulenger gives a second account of the rich fish fauna of Lake Tanganyika, from the collections of the Lemaire Expedition. A number of new genera and species of Cichlidæ are described and well figured, three of the plates being in colors, the work of the artist of the expedition, M. Dardenne.

In the *Proceedings of the Scientific Society of Christiania* Dr. Robert Collett discusses in detail the relations of *Lycodes gracilis*, a fish of the arctic parts of the Atlantic. Several figures are given, together with detailed description. Dr. Collett regards *L. perspicillum* as probably the young of *L. reticulatus*, *L. rossi* as probably the very young of *L. pallidus*, and *L. zoarchus*, from Nova Scotia, as certainly the young of *L. gracilis*. These conclusions differ somewhat from those of Dr. Smith, noted a few months since.

The species of filefish described by Jordan and McGregor from Clarion Island, Mexico, under the name of *Cantherines carolæ*, proves to be identical with the type of Cantherines, *C. sandwichiensis* Quay and Gaimard of Hawaii, a fact first pointed out by Mr. R. E. Snodgrass. It is not evident that either *C. pullus* of the West Indies, or *C. pardalis* of the East Indies, is really different from *C. sandwichiensis*.

In a private letter Professor D'Arcy W. Thompson, of University College, Dundee, corrects the current account of the genus *Eumesogrammus*. The type *E. præcisus* has four lateral lines, not three, the fourth being a ventral branch, accessory to the third, and running from the breast to near the vent. This was correctly described by Dr. Reinhardt, but overlooked by later authors.

In a recent note in the *Naturalist* on Dr. Charles Wilson Greene's studies of the California toadfish, or "midshipman" (*Porichthys notatus*), the writer, by a slip of the pen, made a statement just the opposite of the truth.

The fish showed no luminosity, save when excited by electricity or by ammonia. In an aquarium made alkaline by ammonia water all the spots and organs of the lateral line gave out a brilliant glow, fading away in about twenty minutes. Parts of the fish, after death, were luminous under ammonia. A similar effect was shown by severe electric stimulations, but a mild current produced no effect.

D. S. J.

Compensatory Movements of the Eyes in Fishes.—It is well known that when a dogfish is rotated on its long axis its eyes are

turned so as to compensate in a measure for the abnormal position in which the fish is placed. Lee showed that these compensatory movements may be called forth by stimulating the sense organs of the semicircular canals in a quiet dogfish resting in a normal position, and he therefore believed that the normal compensatory movements of the eye were reflexes produced by a stimulation of the organs of the semicircular canals. E. P. Lyon¹ has made the interesting discovery that certain eye movements can be produced without the intervention of the semicircular canals. If the tail of a dogfish is turned to one side, the eye of the same side is directed forward, that of the opposite side, backward. As this experiment succeeds after the eighth nerves are cut, it follows that this reflex is not to be regarded as originating in the ear. Moreover, when the spinal cord is divided well forward in the body, the reflex ceases, and the author, therefore, rightly concludes that the sensory disturbances, which give rise to the reflex, are located in the posterior part of the trunk and make their way forward through the cord. The author finally calls attention to the uncertainty of compensatory movements of the eye as evidence of stimulation of the organs in the semicircular canals.

P.

Development of Lepidosiren. — The development of this rare and interesting fish is being worked out by J. Graham Kerr,² whose first paper on the subject gives an account of the way in which eggs may be obtained and the external features of their development. The eggs are laid in underground burrows in swamps. The fertilized egg as taken from the nest is enclosed in a thin, horny capsule, round which is occasionally a jelly-like envelope. Segmentation is complete and unequal, as in *Amia*. The gastrula closely resembles that of *Petromyzon*. The medullary folds are low, and the neural axis arises mainly as a solid down-growth. There is no neurenteric canal. Four external gills are developed upon branchial arches, I, II, III, and IV. Auditory and nasal sacs and stomodæum are formed by secondary excavation of originally solid rudiments. The young fish, which at hatching is tadpole-like, remains two weeks without developing pigment, after which the retinal pigment begins

¹ Lyon, E. P. Compensatory Motions in Fishes, *Amer. Journ. of Phys.*, vol. iv (1900), pp. 77-82.

² Kerr, J. Graham. The External Features in the Development of *Lepidosiren paradoxa* Fitz, *Phil. Trans. Roy. Soc. London*, Ser. B, vol. cxcii (1900), pp. 299-330, Pls. VIII-XII.